

MANAGERIAL ACCOUNTING FOR BUSINESS DECISIONS

THIRD EDITION

Ray Proctor





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With contributions from
Nigel Burton, Adrian Pierce and Gary Burmiston



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Introduction to the book for students

How this book can help you

How good are you at thinking? Where would you rank your ability on a scale of 1 to 10? Does this score apply equally to all types of problem you come across, including business problems? Most of us would say we were about average or a little above. Of course, statistically, only half of us are going to be above average. Even if you are right, there is always scope for improvement.

Because you are reading this book, you will no doubt be interested in how the world of business works. This is a very complicated area with many problems ranging from setting selling prices to motivating employees. Managers have to address a wide variety of questions like this on a continuing basis. It is not easy to be knowledgeable about such a wide range of activities. However, managers are often perceived as 'experts' in their fields and are expected to come up with good solutions. They are assumed to be good at thinking clearly. As a manager, how far would you live up to this expectation?

This book aims to help you think clearly about business problems.

As an example of this, what do you think is the value of this book? Is it the amount you paid for it? Or what you could sell it for second hand? Let's examine these answers in more depth.

The amount you paid the bookseller is its 'cost' rather than its 'value'. This 'cost' is an historical amount. It is worth knowing as it forms a record of your past performance (did you pay more or less than other people?) but it is not helpful when it comes to disposing of the book when you have finished with it. In fact, historical cost can be misleading when deciding its second-hand price. When making this decision, the amount you paid for the book is 'irrelevant'; what you should be concerned about is *maximizing future cash flows*. There is a whole chapter in this book about how to tell the difference between relevant and irrelevant cash flows (it is called 'Relevant Costing' although a better name for it would be 'Relevant Cash Flows').

You have probably bought this book because it has been recommended by a lecturer in charge of one of your modules on a course of study. When you finish the module, you have a choice of what to do with the book. You could:

- 1 sell it;
- 2 keep it for reference;
- 3 use it to help with further studies;
- 4 give it away.

Decisions are about choices between possible future actions. Your decision should not take account of what you originally paid because, at the point of disposal, you have no choice about the historical cost; it is a matter of record. The clear thinking about this is as follows.

- 0 *Clarify your objective.* This will probably be to maximize your future cash inflow.
- 1 *Sell it.* This will have a positive effect on your personal cash flow equal to the amount you receive less any money you had to pay out to enable the sale to happen (such as advertising costs).
- 2 *Keep it for reference.* If you want to have your own reference books to help you with your work as a manager, keeping this one will save you paying out for an alternative book covering the same topics. This will have a positive effect on your personal cash flow equal to the price of the alternative book.
- 3 *Use it to help with further studies.* The financial effect of this is the same as keeping it for a reference book. You may use it for a similar educational course, such as an introductory management accounting module on the syllabus of a professional accounting body, in place of the recommended text. This will have a positive effect on your personal cash flow equal to the price of the alternative book. (*Please note that I do not recommend this course of action but I have seen students doing just this.*)
- 4 *Give it away.* This will have a zero effect on your personal cash flow.

Using clear thinking, to obtain the best financial outcome, you will calculate the net cash inflow for each of the four alternatives and choose the highest of these as your decision.

What looked like a simple decision turned out to be a little more complex than expected but you will now feel confident that you have taken the best course of action possible. It is important to appreciate that this type of thinking will be very useful in your private life as well as your work as a manager. Think about the following situation.

To celebrate a special occasion, a close friend of yours has saved up and paid £300 for two tickets (best seats in the house) to see a show in the West End of London. Unfortunately, the day before the performance his partner falls seriously ill and will not be fit to travel for several weeks. Your friend advertises the tickets for sale on the Internet and stipulates, 'offers over £150 only'. Due to the short notice, only one offer is received and that is for £100. Advise your friend.

Having thought clearly about this, you probably pointed out that, although he was very reluctant to sell the tickets for less than half-price, his original payment of £300 was irrelevant. To maximize his future cash inflow, he should accept the offer of £100. The alternative is to get nothing for the tickets and be £100 worse off *than he is at present* if he accepted the offer.

Accounting and managerial accounting

Accounting is not about numbers.

It is about organizations, what they do and the things they use. Sales, equipment, remuneration, purchases, debtors, owners' investments and many other items all fall within this description. In order to express the relationships between them, they are all

measured in the same units. These units are the currency used by the organization. In the UK, this unit is usually the pound sterling; in the USA it is the dollar, etc.

The numbers are merely the medium through which the value of these things, and changes to them, are expressed. When a credit sale changes stock into a debtor, all three items are measured in the same units. A sale of £80 may change stock valued at £50 into a debtor of £80. Competence at arithmetic is very useful in accountancy, knowledge of higher mathematics is less so. The ability to estimate answers mentally is very valuable as this enables a check to be performed on the broad accuracy of the detailed calculations. These estimates give ballpark figures approximating to the accurate answers and, for some purposes, are sufficient in themselves.

You probably realize from what you have read so far that you, the reader, are being addressed as a manager, present or future. You *may* also be, or become, a management accountant but the emphasis of this book is *management* (rather than accounting). Of course, the accounting skills covered are important but please remember that they are a means to an end and not an end in themselves. A few years ago, the Chartered Institute of Management Accountants changed the name of its monthly magazine from *Management Accounting* to *Financial Management*. This change of name reinforces the primary objective of management accounting: it is to help managers do their work better. Much of this involves using quantitative information already captured by the existing management information system.

This objective clearly differentiates management accounting from financial accounting. Financial accounts attempt to tell the story of what has happened in the business during a period now ended and what it looks like at the end of that period; it is all about the *past*. In contrast, management accounting is about helping the business to perform better in the *future*. Also, unlike periodic management accounts which are for internal use only, the statutory annual report and accounts are available to the public at large. They are a legal requirement rather than a management tool. They are not designed to help managers perform better.

The book's emphasis on management is reinforced by the inclusion of a section at the end of each chapter called 'The manager's point of view'. These are mostly by Nigel Burton who has been a high-level manager for many years (*not an academic*). He started his business career as a qualified accountant and rose to become Managing Director. After the chapter has covered the problems and how to tackle them, Nigel discusses the practical aspects based on his long experience of using them. I find these sections very interesting and insightful; as a future manager, I hope you do too.

What is included in this book

The main areas covered by this book are:

- decision making using relevant, variable (a.k.a. marginal) costing;
- fixed asset investment appraisal for long-term decision making;
- product costing and pricing, internally and externally;
- controlling operations through the use of budgets;
- alternative approaches to performance management.

These areas cover a wide range of complex problems. The knowledge and techniques in this book will help you to solve these. Each chapter discusses the problems, explains the techniques available for solving them, encourages you to practise these techniques and *points out their limitations*. It is important for managers to understand the limitations of the techniques they use. Each one is based on a financial model which makes assumptions. For example, calculating a 'pay-back period' for a proposed purchase of fixed assets assumes that business cash flows are perfectly even with the same amount of money flowing in and out every day. How many businesses do you know where this happens? I do not know of any but this technique is very widely adopted.

A consequence of this is that your calculations produce estimates rather than precise numbers. An answer given to five decimal places may be very precise but that does not mean to say that it is accurate! Due to the assumptions built into the models, all the decimal places, and even some numbers to the left of the decimal point, may be worthless as well as misleading. It is important to remember this.

The book also gives an introduction to basic cost behaviour and explains the difference between profit and cash. If you are not confident of your understanding of these, it would be sensible to look at them before moving on to the main body of the book. It also has a section on ratio analysis and working capital management. These two connected topics form a bridge between financial and management accounting. They are included because they use information provided directly by the financial accounts to help managers improve the future performance of their organizations.

At the end of the book, there is a chapter looking at how managerial accounting is used by not-for-profit organizations. These include the National Health Service (annual budget of approximately £100 billion!), the British Broadcasting Corporation, state-sponsored education, national and local government agencies, together with charities such as Oxfam and the Red Cross. These constitute a very important sector of the United Kingdom's society and economy. The last section of the book concerns the current issues in managerial accounting, those topics whose usefulness is being debated. A good example of this is the 'Beyond Budgeting' management model. Companies adopting this model usually find that their traditional budgetary control systems no longer fit their structure and the model encourages them to abolish this control mechanism that they have relied on for many years. No wonder there is a huge amount of opposition to this new approach but it has proved very successful for some organizations.

Much thought has been given to the order of the contents. The topics are presented in a logical sequence but not a unique one. Any chapter can be studied without reference to other chapters but they are easier to understand in the light of the other chapters in the same part. For example, the two chapters on budgets are best read consecutively and the five chapters on costing and pricing are best read in conjunction with each other. The order in which Parts 2, 3, 4 and 5 are studied is not so important.

I strongly recommend that you attempt the self-assessment questions as you come across them. This gives an active, rather than passive, understanding of the subject matter and aids comprehension of the following sections. It is easy to believe you understand what you have just read, but attempting these questions will test this and reinforce your understanding of the subject matter.

Summary

The objective of this book is to make you a better manager by enabling you to understand and apply managerial accounting techniques effectively. By knowing the assumptions and approximations on which these financial models are constructed, you will be aware of their limitations and the danger of applying their results without wider consideration of their business context. Most business decisions are too important to be left solely to accountants. Use the information provided by them as a starting point for your deliberations, not as a prescribed course of action.

Organizational activities are not scientifically deterministic. If they were, there would be little or no need for managers. Managing is more of an art than a science. Information provided by accountants is important but it is not sufficient in itself. You also need a good intuitive feeling for how your customers, suppliers, markets and regulatory environment will behave in different situations. This comes from experience rather than academic learning. However, if I did not believe that the contents of this book could help you be a better manager, I would not have made the effort to write it. I wish you success in your management careers.

Introduction to the book for lecturers

Rationale

Is there really a need for yet another book on management accounting? There are many texts currently available on this subject. They tend to fall into one of two categories. First, those aimed at students aiming to become qualified accountants and, second, those aimed at students of business and management who do not intend to be accountants.

This book falls firmly into the second category. But the question still remains, is another book of this type needed? As an experienced teacher of business and management students, I believe it is. My justification is as follows.

Management accounting books for business and management students go into less technical detail than those aimed at professional accountancy students. This is sensible and I also take this approach. However, in my opinion, this only goes partway to fulfilling these students' needs. They also need to know the practicalities of how the techniques are actually used in business. Without this, they will end up as foundation-level accountancy students instead of what they wish to be, i.e. effective business managers.

Management emphasis

The reluctance of some students to embrace management accounting has arisen due to the emphasis being misplaced on accounting rather than management. All too often, assessment of students has tested mathematical proficiency rather than ability to apply appropriate techniques to business situations. This book is different in that it has a **strong management approach**. This is especially evident in 'The manager's point of view' section of each chapter and the chapter on not-for-profit organizations. These unique features use actual examples from the world of business to place the theory into its practical context. Their objective is to remind students that management accounting is a means to an end and not an end in itself.

Market

This introductory book is particularly suitable for students of business and management who have no previous knowledge of management accounting. Provided this condition

applies, it is suitable for both undergraduate and MBA students. It is also relevant and useful to practising managers.

Many readers will work in the service sector rather than manufacturing so I have used examples from the service sector wherever I can to reflect this. I also include a chapter highlighting managerial accounting in the 'not-for-profit' sector in order to make the book more relevant for those students working in this large and important sector of the economy.

Accounting and managerial accounting

Accounting is not about numbers; it is about organizations, what they do and the things they use. Sales, equipment, remuneration, purchases, debtors, owners' investments and many other items all fall within this description. In order to express the relationships between them, they are all measured in the same units. These units are the currency used by the organization. In the UK this unit is usually the pound sterling; in the USA it is the dollar, etc.

The numbers are merely the medium through which the value of these things, and changes to them, are expressed. When a credit sale changes stock into a debtor, all three items are measured in the same units. A sale of £80 may change stock valued at £50 into a debtor of £80. Competence at arithmetic is very useful in accountancy, knowledge of higher mathematics is less so. The ability to estimate answers mentally is very valuable as this enables a check to be performed on the broad accuracy of the detailed calculations. These estimates give ballpark figures approximating to the accurate answers and, for some purposes, are sufficient in themselves.

Financial accounting is essentially orientated towards the past. Its rules are intended to ensure that the statements of performance for a financial year, and the position at the end of that year, give a true and fair view of the organization. Financial accounts can only be completed after the financial year has ended.

Management accounting is orientated towards the future. It is primarily concerned with the provision of information to managers to help them plan, evaluate and control activities. It is essentially a service function: a means to an end rather than an end in itself. Managerial accounting also fits this description but the use of the word 'managerial' emphasizes the service role. This may seem obvious but, for much of the twentieth century, management accounting was used mainly to serve the needs of financial accounting rather than to assist managers in their tasks. (This theme is discussed further in the chapter on balanced scorecards.) **Managerial accounting is about improving the future performance of organizations.**

Structure of the book

The structure of this book is summarized by the table of contents. It is split into five parts preceded by this introduction for lecturers as well as an introduction for students and followed by a glossary and an index. Each chapter starts with a detailed list of contents

and an introduction to give the reader a framework for their study. The main topics are then discussed in a logical order. Many illustrative examples are given to show how each technique is applied, followed by an invitation to the reader to attempt a similar question to test their understanding. Answers to these self-assessment questions are given at the end of each chapter.

One important feature appearing in each chapter is the section on the limitations of the techniques discussed. It is very important for students to appreciate that these techniques are financial models of business activity and that no model can ever be as rich as the reality it attempts to represent. In simple terms, the answers produced by the calculations are approximations and not exactitudes. An answer given to five decimal places may be very precise but that does not mean to say that it is accurate! Due to the assumptions built into the models, all the decimal places, and even some numbers to the left of the decimal point, may be worthless as well as misleading.

Next comes 'The manager's point of view'. These sections are mainly written by Nigel Burton, who has spent over 20 years as a high-level manager in the chemical industry (he is also a qualified accountant). He writes from a practical point of view, giving many insights – born of his extensive experience – into the ways managers can use accounting techniques to their advantage. The chapters on not-for-profit organizations and working capital management are written by Adrian Pierce, who is also a qualified accountant and has practised his profession for more than 15 years in various businesses. At the time of writing, he holds a senior management position in a multi-million pound not-for-profit organization. His experience offers a particularly relevant outlook on the extra dimensions of this type of organization. The whole of the chapter on managerial accounting in not-for-profit organizations is really an extended 'Manager's point of view'.

After this section is a 'summary' of the main points covered by the chapter. This is to help the reader review the material and make connections between the various items discussed. This is similar to the complete picture emerging from the correct placing of all the pieces of a jigsaw. (It can also serve the useful function of a summary 'revision list' for examinations.)

Following this, the chapter is concluded by a section concerning assessment. First, the answers are given to the self-assessment questions contained within the chapter.

Next, an extensive case study is presented (the answer is given in the Lecturer's Guide). These cases are holistic in that they attempt to bring together many of the different aspects discussed within the chapter. They are suitable for either individual students or groups of students. It is impossible to be exact but these case studies are unlikely to take less than two hours to complete.

Finally, several additional questions are presented for extra practice. The answers to some of these are given at the end of the book. The answers to the remaining questions are given in the Lecturer's Guide, which will also contain masters of overhead transparencies, etc. Supplementary material can be downloaded from: <http://www.booksites.net/proctor>

In summary, each chapter:

- sets the context;
- introduces the subject;
- explains the principles and techniques in easy steps;
- encourages the reader to practise the techniques immediately;

- explains the limitations of the financial models;
- gives the manager's point of view;
- gives a summary of the main points;
- gives answers to self-assessment questions;
- has a comprehensive case study;
- has additional practice questions.

Much thought was given by the author to the order of the contents. The topics are presented in a logical sequence but not a unique one. Any chapter can be studied without reference to other chapters but they are easier to understand in the light of the other chapters in the same part. For example, the two chapters on budgets are best read consecutively and the five chapters on costing and pricing are best read in conjunction with each other. The order in which Parts 2, 3, 4 and 5 are read is not so important.

Students should be encouraged to attempt the self-assessment questions as they come across them. This gives an active, rather than passive, understanding of the subject matter and aids comprehension of the following sections. It is easy for them to believe that they understand what they have just read, but attempting these questions will test this and reinforce their understanding of the subject matter.

Writing style

The writing style attempts to be concise and unambiguous. The overriding objective is **clarity**. Diagrams, many of them original, are included wherever they can aid understanding. Explanations are kept as simple as possible in order not to confuse. Intermediate steps in the solutions to questions have been included to ensure students can follow them. However, unnecessary algebra has been omitted in favour of a common-business-sense approach. My experience is that students appreciate this approach and learn faster. Much of the text is purposely written in a 'friendly' style to engage readers and put them at their ease. It is consistently practical in its approach, often referring to real situations.

Summary

The objective of this book is to make students into effective managers by enabling them to understand and apply managerial accounting techniques effectively. By knowing the assumptions and approximations on which these financial models are constructed, they will be aware of their limitations and the danger of applying their results without wider consideration of their business context. Most business decisions are too important to be left solely to the accountants. The information provided by the accountants should be used as a starting point for deliberations, not as a prescribed course of action. My hope is that this book will play a small part in raising the standard of management wherever it is used.

About the authors

Ray Proctor started his career as an auditor. He then worked as a management accountant for a UK subsidiary of a multinational company in the food business. After this he became the accountant for a touring caravan manufacturer where his role embraced all aspects of financial and management accounting. On leaving this firm, he and his wife started their own business manufacturing and selling weaving equipment. At the same time as this venture, he began to teach accounting on a part-time basis. He was encouraged to qualify as a teacher and, upon achieving this objective, became a full-time teacher in further education. Having established himself in this role, he gained a Warwick University MBA by distance learning in his spare time. He then moved into higher education, joining the staff of Coventry University in 1996 as senior lecturer in accounting. Currently, he also acts as a tutor on the Management Accounting module of the Warwick University MBA. In addition to his accounting and management experience in the commercial world, he has more than 25 years' experience of teaching accounting.

Nigel Burton has written 'The manager's point of view' sections for most chapters. These are not only authoritative and knowledgeable, but also interesting and informative – no mean feat when writing about accountancy! He qualified as a chartered accountant in 1976 with a London firm, Tansley Witt & Co. After two years of post-qualification experience, he opted for a life in industry, and became financial accountant of the UK subsidiary of a large American chemical corporation. Here he remained for the next 21 years. His initial stint as financial accountant was followed by a three-year term in a European financial capacity, before becoming chief accountant, and then financial director, in the UK. He was appointed managing director after a reorganization in 1992, and in 1996 assumed additional responsibility for one of the European business groups. His extensive experience of life in a manufacturing environment has been seen from not only the financial, but also the administrative and business perspectives. Throughout this period, he has been fully involved in the management of change within his organization, reflecting the rapid technological and managerial advances taking place in the business world. He is, therefore, admirably placed to comment on the contribution that managerial accounting can make to a company's development.

Adrian Pierce has written the chapter on not-for-profit organizations and co-authored the chapter on working capital management. I contributed some of the theoretical content to the latter but he has written the majority of the text, including many practical aspects of the day-to-day 'juggling' of working capital which is unavoidable when organizations do not have sufficient cash to enable their operations to run smoothly. Ability in these areas can literally mean the difference between life and death for a business. I know

of no one more skilled than Adrian in this field and thank him for taking some of his valuable time to share his knowledge with us. He started his career as an auditor in a 'Big Six' audit firm, before becoming the accountant for a small UK manufacturing company in the outdoor leisure industry. He began as assistant management accountant but soon progressed to the all-embracing role of company accountant. In this senior position, he gained valuable management experience in addition to developing his financial and management accounting abilities. Also, during this time, he qualified as a chartered management accountant. He remained with this company for several years, during which it experienced sustained growth in a fiercely competitive market. He then moved on to become the financial accountant for a high-profile public-sector organization. After a couple of years he was also appointed as company secretary. As part of this multiple role, he has gained much experience in the submission of claims to key funding partners. This particular activity has given him significant insight into the extra dimensions of not-for-profit organizations. He currently occupies a senior management role in a not-for-profit organization and has more than 15 years' experience of accounting and management.

Gary Burmiston has written 'The manager's point of view' sections for the chapters on Beyond Budgeting and Balanced Scorecards. He qualified as a Chartered Management Accountant with British Gas in 1995. Since that time he has held a number of roles in a variety of business sectors. After qualifying with British Gas he left to join Axa Sun Life as a sales accountant. He remained there for a couple of years before joining Bass Brewers as a Commercial Finance Manager responsible for a number of production sites. After four years he left to join Capital One Bank eventually becoming CFO (Infrastructure), responsible for the cost base of the European business. He has since returned to the utility sector where he works for a major energy provider in the role of Operations Finance Manager, responsible for the cost base of the retail business. As part of his wide-ranging experience of managing costs in large blue-chip organizations he has been responsible for introducing and managing a number of cost reduction programmes and introducing performance monitoring systems – both used to drive improvements in the cost base of businesses. In addition, he has been responsible for evaluating Beyond Budgeting at a number of organizations and speaking at BBRT meetings, giving him significant insight into performance management tools and techniques.

Overview

I personally accept full responsibility for the complete contents of this edition. Every single piece of text is there because I want it to be; any errors are mine. I hope these are few and far between but please let me know if you find any. Indeed, I welcome and encourage feedback. I hope you find the book improved and useful.

Acknowledgements

I would like to take this opportunity to thank my co-writers, Nigel Burton, Adrian Pierce and Gary Burmiston, for their encouragement, enthusiasm and willingness to share their experience with the rest of us. This book would be significantly lacking without their contributions. I find their writing interesting, insightful and helpful; I have learned more than a little from them. I am sure readers will also benefit from their unique insights.

I would like to thank the staff of Pearson Education, the publishers of this book. In particular, I would like to thank my original acquisitions editor, Paula Harris, for her belief in this text and in me. I would also like to thank Matthew Smith, Amanda McPartlin, Tim Parker, Mary Lince, Jacqueline Senior and Alison Stanford for guiding me through this project over the years. They, and their assistants, have always been helpful and courteous to me, a first-time author who did not 'know the ropes'.

My colleagues at Coventry University also deserve my thanks for their advice, constructive criticism and help with the end-of-chapter questions and cases, particularly David Blight, Steward Hughes, John Panther, Keith Redhead, Graham Sara and Stan Smith. My thanks also go to Adam Byford, Bob Evans, Robin Fraser and Ivan Proctor for reviewing certain sections of the text.

Thanks also to my wife, Sara, and my sister, Rita, for help with proofreading, indexing, scanning and administration. My students also deserve my thanks for the searching questions they have asked me over the years, challenging my understanding and helping me to learn more about my subject. I would also like to thank those of my friends who willingly helped with the arduous task of proofreading.

Finally, I would like to thank the Chartered Institute of Management Accountants for allowing me to reproduce definitions from *Management Accounting Official Terminology* to construct an authoritative glossary.

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